

Work Order ID 61115

August 6, 2010 12:52:16 PM



Page 1

Item ID: D350-748-101

Accept



Setup Start

Revision ID:

Item Name: Crosstube Installation, High Fwd

Start Date: 8/06/10 Start Qty: 1.00

Required Date: 8/13/10 Req'd Qty: 1.00

Reference: RA110068 - RETURN



Cust Item ID:

Customer:

DART			
Dart Aerospace Ltd.			
1270 ABERDEEN ST. HAWKESBURY, ON, CANADA K6A 1K7			
		TC APPROVAL # 09-89	
		TEL: 1-613-632-5200	
P/N	D350-748-101	CHG	CHG001
DESC.	Crosstube Fwd High	STC	SH06-27
LOT	B55512	STC	SR02359NY
MODEL	AS350/355	STC	
MADE IN CANADA			
D2729-1			

Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
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D350-748-141	Rev E
--------------	-------

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPPD350-748-101

CHG001

8/10/08/12

105

0.00



QC

Memo

0.00

Quality Control

INSPECT RA110068

8/10/08/06

ff for CL 10/08/12
(Red + White Labels only)

(X)

Work Order ID 61115

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Page 2

Item ID: D350-748-101

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Installation, High Fwd

Start Date: 8/06/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/13/10 Req'd Qty: 1.00



Customer:

Reference: RA110068

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

0.00



Crosstubes

Crosstubes

Crosstubes

Memo

REMOVE CLAMPS & SUPPORTS -KEEP
REMOVE ABRASION STRIPS-SCRAP
INSTALL NEW ABRASION STRIPS
2 X D2856-400-710 B
RE-INSTALL ORIGINAL CLAMPS AND SUPPORTS
(Install Abraison strips as per Dwg D350-748-141 & QSI 035.)

(Install supports Using Dt8876 as per Dwg D350-748-141, Torque to 60-80 IN-LBS)

0.00

0.00

0.00

210

QC5- Inspect part completeness to step on W/O



QC

Memo

Quality Control

Swlosia



ET 10 05 11

Work Order ID 61115

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Page 3

Item ID: D350-748-101

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Installation, High Fwd

Start Date: 8/06/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/13/10 Req'd Qty: 1.00



Customer:

Reference: RA110068

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

ENSURE ORIGINAL KIT IS INCLUDED IN BOX

10/8/12

SL

230

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

8/26/12

EL

240

Packaging

0.00



Packaging

Memo

0.00

Packaging

RE-PACKAGE PER PPP USING NEW B/N
NEW LABELS AND PAPERWOK REQ'D

8/26/12

104

REUB

10/8/12 SL P

CHG001

Work Order ID 61115

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Page 4

Item ID: D350-748-101

Accept

Setup Start

Revision ID:

Stop

Item Name: Crosstube Installation, High Fwd

Start Date: 8/06/10 Start Qty: 1.00

Required Date: 8/13/10 Req'd Qty: 1.00

Reference: RA110068

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/10 J

MF
10-8-13

Picklist Print

Page 1

August 6, 2010 12:53:08 PM

Work Order ID: 61115

Parent Item: D350-748-101

Parent Item Name: Crosstube Installation, High Fwd



Start Date: 8/06/10

Required Date: 8/13/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 06-07-05 JLM
IPP Rev:B Update qty of MS21042L5 06-09-12 KJ
IPP Rev:C Rev B 07-11-15 DD
IPP Rev D Combined manufacturing 08.04.02 EC verified by: DD
IPP Rev:E 08-06-24 revD as per dwg DD verified by:EC IPP Rev:F
10.08.04 added QSI010 4.3 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2856-400  Abraison Strip		Manufactured	No			200	f	340.9788	1.181	1.243158			
<i>N</i> <i>A</i> <i>mf 10-8-16</i>													
<u>Location</u>						<u>Loc Qty</u>	<u>Loc Code</u>						
ST403						340.9788421							
56626						124.978842							
59920						216							
D350-748-101  Crosstube Installation, High Fwd		Manufactured	No				Each	1.0000		0			
<u>Location</u>						<u>Loc Qty</u>	<u>Loc Code</u>						
FG102						1							
59170						1							

ORIGINAL B/N 55512

Item	Qty	Part Number	Description
	-141		
1	X	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
2	1	D6017-115	CROSSTUBE
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC. M-MS21920-20)
8	1	MS27039-1-10	SCREW

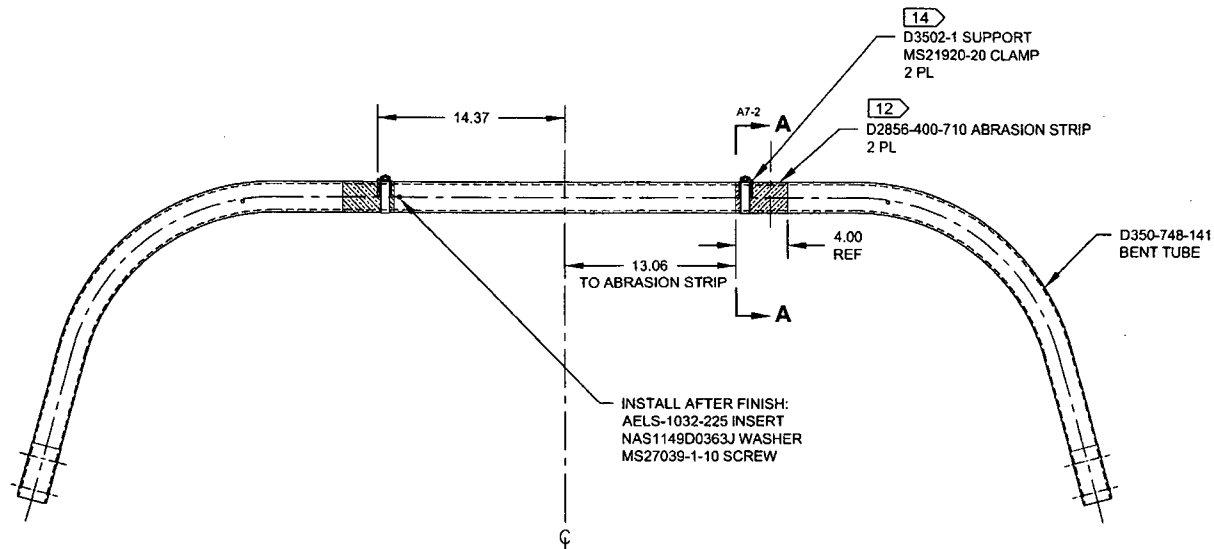
GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6017-115
FINISHED LENGTH = 110.270±0.06
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 30.45 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING.
- 12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

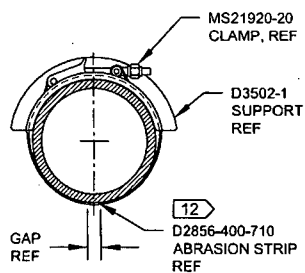
6645

RELEASED
2009-10-29

E	REVISE GENERAL NOTES: UPDATE TO CURRENT ADD STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A6-3); TOLERANCES (ZN C6-3, D1-3)	RF	09.09.30
D	MAG. PARTICLE AND CAD PLATE AS MFD.	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D6017-115 & PRIME AND PAINT	CP	06.06.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>Q</i>	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>Q</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>Q</i>	D350-748-141	SHEET 1 OF 4
APPROVED	<i>Q</i>	TITLE	SCALE
DE APPR.	<i>Q</i>	CROSSTUBE (AS 350/355 HI FWD)	NTS
DATE	09.09.30	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



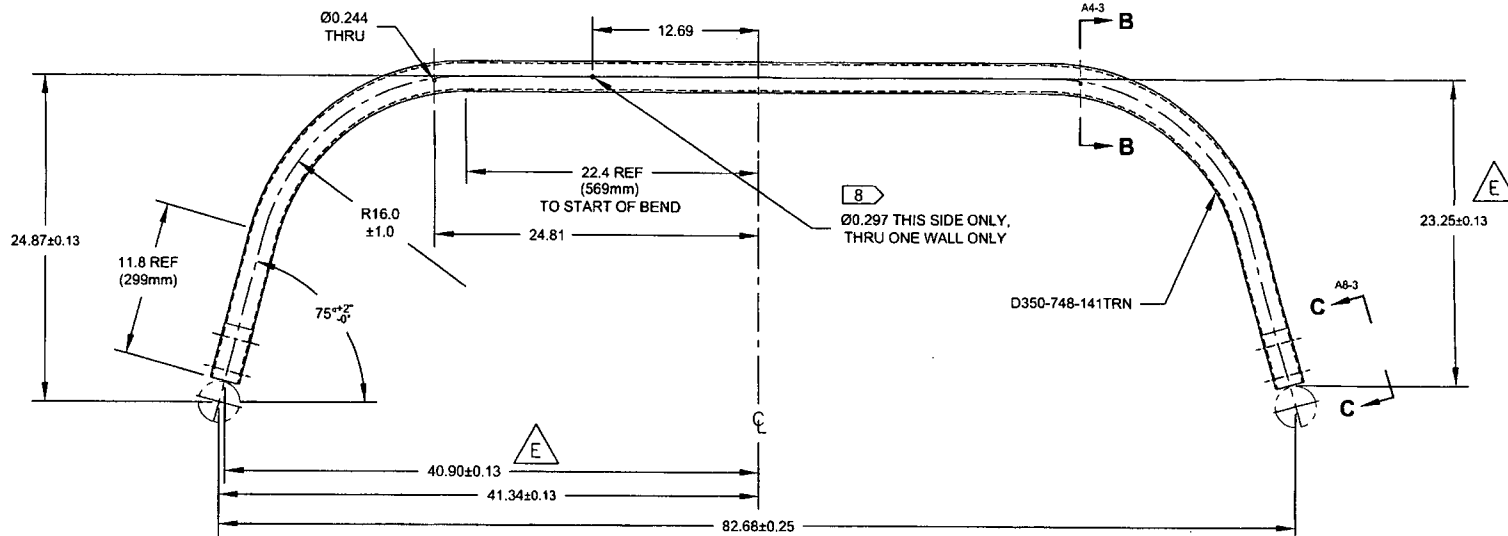
**D350-748-141
ASSEMBLY DETAIL**



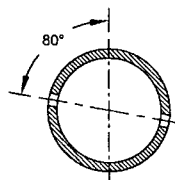
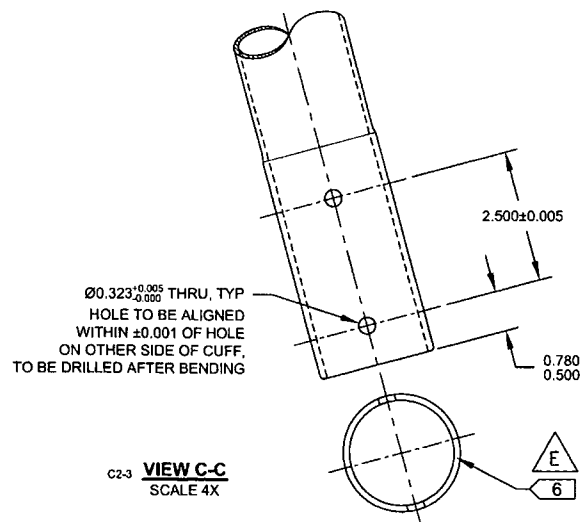
SECTION A-A D4-2
SCALE 4X

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2009-10-29

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MFG. APPR.	RF	D350-748-141	SHEET 2 OF 4
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D350-748-141
BENDING AND DRILLING DETAIL 10



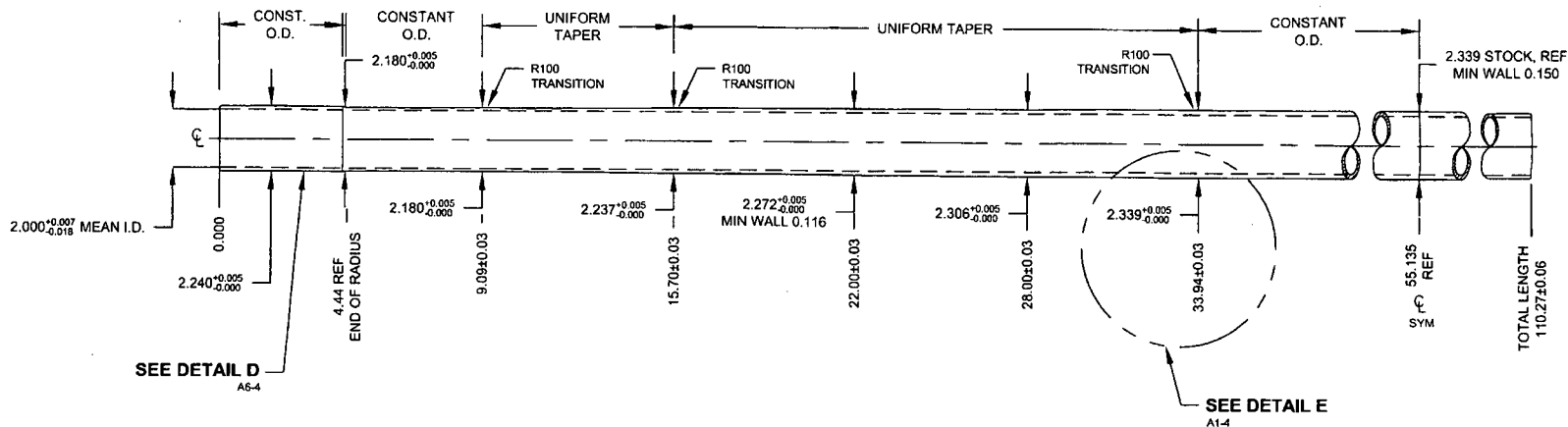
SECTION B-B D3-3
SCALE 4X

61115

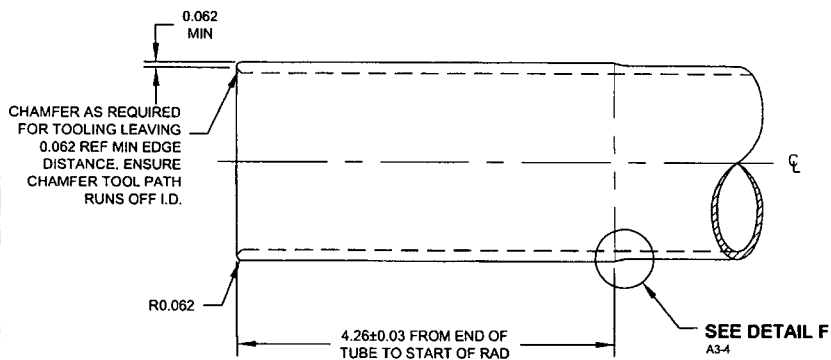
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 2009-10-29

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CHECKED	90	DRAWING NO.	REV. E
MFG. APPR.	10	D350-748-141	SHEET 3 OF 4
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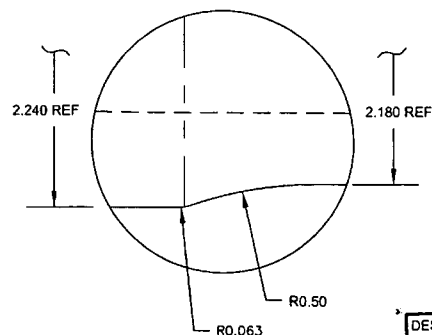
8 7 6 5 4 3 2 1



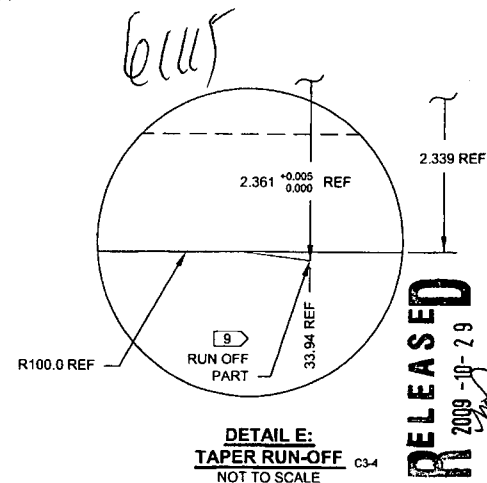
**D350-748-141TRN
TURNING DETAIL**



**DETAIL D:
CROSSTUBE CUFF** C7-4
SCALE 3X



**DETAIL F:
CUFF TRANSITION** A5-4
NOT TO SCALE



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MFG. APPR.	90	D350-748-141	SHEET 4 OF 4
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RELEASED
2009-10-29

8 7 6 5 4 3 2 1

D350-748-101 D55510 CHG002

→ Kit complete. Paper work is good

→ x-tube needs new Abrasion strips installed

ACS expect Return

6/11/15

x-tubes
- Remove clamps + supports (keep)

- Remove Abrasion strips + sensor

- install new Abrasion strips in correct location to Dry.
- Re install original clamps + supports

ACS - inspect work

Package - Package with original Kit + Paper work

install new talk with B#is @ CHG002
(keep white)

ACS - ensure original Kit in in Box

PP

ACS

Dart Aerospace Ltd

W/O:			WORK ORDER CHANGES					
DATE	STEP		PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries